

**REMARKS**

Entry of this Amendment is proper under 37 C.F.R. § 1.116, because the Amendment places the application in condition for allowance for the reasons discussed herein and does not raise any new issue requiring further search and/or consideration because the amendments amplify issues previously discussed throughout prosecution; does not present any additional claims; and places the application in better form for an appeal should an appeal be necessary.

Entry of the Amendment, reexamination and further and favorable reconsideration of the subject application in light of the following remarks, pursuant to and consistent with 37 C.F.R. § 1.116, are thus respectfully requested.

As correctly indicated in the Office Action Summary, claims 44-82 are pending in the application and are under consideration; claims 44-82 stand rejected.

By way of the instant Amendment, Claims 44, 45, 47, 49, 51, 60, 62, 73 and 80 have been amended. Claim 65 has been canceled without prejudice or disclaimer to the subject matter disclosed therein.

Claim 44 has been amended to more clearly recite the claimed subject matter by deleting language to which the Examiner objected as not limiting. Additional redundant language in claim 44 has been deleted. The HPV-16 strain recited in Claim 65 is now recited in Claim 44 and Claim 65, has been canceled.

Claim 45 is amended to improve the clarity of antecedent basis in view of the amendments to Claim 44.

Claim 47 is amended to incorporate language from Claims 60 and 61 in the alternative.

Claim 49 is rewritten in independent form. Language from Claim 44 which would be redundant in view of the inherent properties of the features recited in Claim 49 has not been repeated in newly independent Claim 49. The phrase "homologous or identical" has been deleted from claim 49.

Claim 51 is amended to exchange "polypeptide" for "compound," consistent with the antecedent basis in Claim 50.

Claim 60 is amended to correct the spelling of polypeptide.

Claim 62 is rewritten in independent form, incorporating language from Claim 44. Language from Claims 44 and 48 which would be redundant in view of the inherent properties of the species recited in Claim 62 was not repeated in newly independent Claim 62. The phrase "homologous or identical" has been canceled.

Claim 73 is rewritten in independent form, incorporating language from Claim 44. Language from Claims 52, 51, 50, and 44 which would be redundant in view of the inherent properties of the species recited in Claim 73 was not repeated in newly independent Claim 73. The "7.5K promoter" has been more thoroughly named as "a vaccinia virus 7.5K promoter." One of skill in the art would recognize that the 7.5K promoter referred to a specific promoter of the vaccinia virus that has that designation.

No new matter has been added by these amendments and no new issues are raised. Support for the present amendments can be found throughout the specification and original

claims, and at least as described in prior papers for previously presented claims.

Applicants reserve the right to file a continuation or divisional application on the canceled subject matter.

**Interview**

Applicants thank the Examiner for the courtesy of a telephone interview with the undersigned representative on December 15, 2003. The present amendments were discussed. It is Applicants' belief, that on first reading during the interview, and subject to a full consideration of this paper, the Examiner agreed that the claims presented herein overcame the outstanding rejections under 35 U.S.C. § 112.

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**Regarding matters of form:**

Claim 44 is objected to as allegedly reciting a conditional feature, where the condition is inherently satisfied in consideration of the rest of the claim. Simply in order to expedite prosecution, Claim 44 has been amended to delete the conditional phrase.

**Claim rejections under 35 U.S.C. § 112, second paragraph:**

Claims 44-82 have been rejected under 35 U.S.C. § 112, second paragraph as allegedly indefinite. Without agreeing with the reasons for the rejection cited on page 6 of the pending Office Action (Paper No. 25) except as noted below, Applicants believe that the present amendments obviate any reasons for the rejection.

Specifically, claim 44 was rejected for the recitation of the limitation "the natural peptide." Claim 44 has been amended to delete the conditional phrase in which these words appeared. Therefore the rejection of claim 44 is moot.

Claim 45 has been rejected for recitation of "said polypeptide" which allegedly had insufficient antecedent basis in Claim 44. Claims 44 and 45 have been amended. Claim 44 recites "at least one immunogenic polypeptide" and Claim 45 accordingly refers to "said immunogenic polypeptide." Therefore, the rejection has been obviated.

Claim 51 has been rejected for reciting "said compound" in reference to the polypeptide of Claim 50. Claim 51 has been amended to repeat them "polypeptide" of Claim 50. Therefore, the rejection is obviated.

Claim 73 has been rejected for the recitation of "the sequence encoding at least one immunogenic polypeptide," which referred back to the corresponding phrase in Claim 44, from which Claim 73 formerly indirectly depended. Claim 73 has been rewritten in independent form and the cited phrase clearly refers to an element recited earlier in the Claim. Therefore, the rejection has been obviated.

Claim 73 has also been rejected for the recitation of "the 7.5 K promoter." Applicants note that the specification teaches that the 7.5K promoter is one of several suitable promoters of the vaccinia virus. See page 18 at lines 23-26. One of skill in the art would recognize that the term is not generic, but rather the designation refers to a specific promoter from vaccinia virus. Nevertheless, Claim 73 has been amended to recite "a

vaccinia virus 7.5 K promoter" to more thoroughly describe the recited promoter.

Therefore, the rejection is clearly obviated.

Claim 80 has been rejected for a topographical error, reciting "is a subject" where "in a subject" was clearly intended. Claim 80 has been amended to correct the error. Therefore, the rejection has been obviated.

The foregoing addresses each of the reasons asserted for the rejection of claims 44-82 under 35 U.S.C. § 112, second paragraph. As all the reasons have been obviated or rendered moot, withdrawal of the rejection is respectfully requested.

**Claim rejections under 35 USC § 112, first paragraph:**

Claims 44-82, all the pending claims, have been rejected as allegedly not described in the specification in accordance with the written description requirement of 35 U.S.C. § 112, first paragraph.

Specifically, the Examiner has asserted that the specification taken with the knowledge in the art only clearly teach antigenicity of E6 and E7 of HPV-16. Moreover, the Examiner alleged that the specification fails to provide an adequate written description of the claimed genus of homologues of immunogenic derivatives of HPV E6 and E7. Further, the Examiner has alleged that there is no teaching of a consensus structure that defines non-oncogenic variants.

Without agreeing with the reasons for the rejection, Applicants have amended Claims 44,45, 47, 49, 51, 60, 62, 73 and 80 of the application. Claim 65 has been

canceled. Claims 49, 62 and 73 are now written in independent form. Applicants note that in presenting rewritten claims in independent form, some language recited in the claims from which the rewritten claims formerly depended has not been repeated, because it describes features inherent in the elements of the rewritten claims and would be redundant. Claims 44-82, as amended, are clearly described by the specification in a manner sufficient to satisfy the requirements of 35 U.S.C. § 112, first paragraph. The issues raised by the Examiner are discussed below.

Claim 44 has been amended to recite an immunogenic polypeptide encoded by the E6 or E7 region of a HPV-16 papillomavirus genome, and Claim 65 has been canceled. Newly independent Claims 49, 62 recite SEQ ID NO: 1 and SEQ ID NO:2 which comprise sequence from HPV-16. Claim 73 recites HPV-16.

Claims 49 and 62, which formerly depended from Claim 44, recited the phrase "homologous or identical to" in modifying SEQ ID NO: 1 or 2. These claims have been rewritten in independent form, and the phrase "homologous or identical to" has been deleted.

Claim 47 recites that the immunogenic polypeptide is a non-oncogenic variant. Claim 47 has been amended to incorporate language of Claims 60 and 61, in the alternative, reciting modifications of the E6 and E7 polypeptides that are clearly described in the specification as corresponding to non-oncogenic variants. See the specification at pages 9-10 and the references cited therein. Accordingly, the non-oncogenic aspect of the immunogenic polypeptides recited in claims 47, 60, 61, and 73 is fully described.

In view of the foregoing, each of the issues asserted by the Examiner in the rejection are obviated. Accordingly, Applicants respectfully request withdrawal of the rejection.

**CONCLUSION**

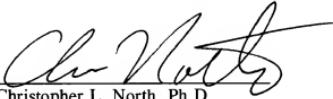
Further and favorable action in the form of a Notice of Allowance is believed to be next in order. Such action is earnestly solicited.

In the event that there are any questions relating to this application, it would be appreciated if the Examiner would telephone the undersigned concerning such questions so that prosecution of this application may be expedited.

Respectfully submitted,

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